**DEPARTMENT OF TRANSPORTATION**
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

# WELDING INSPECTION REPORT

**Resident Engineer:** Pursell, Gary
**Address:** 333 Burma Road
**City:** Oakland, CA 94607

**Report No:** WIR-013135
**Date Inspected:** 28-Mar-2010

**Project Name:** SAS Superstructure
**Prime Contractor:** American Bridge/Fluor Enterprises, a JV
**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

**OSM Arrival Time:** 700
**OSM Departure Time:** 1900
**Location:** Shanghai, China

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|---|---|---|---|---|---|---|---|---|
| **CWI Name:** | | | | **CWI Present:** | ☐ Yes | ☑ No | |
| **Inspected CWI report:** | ☐ Yes | ☐ No | ☑ N/A | **Rod Oven in Use:** | ☐ Yes | ☐ No | ☑ N/A |
| **Electrode to specification:** | ☐ Yes | ☐ No | ☑ N/A | **Weld Procedures Followed:** | ☐ Yes | ☐ No | ☑ N/A |
| **Qualified Welders:** | ☐ Yes | ☐ No | ☑ N/A | **Verified Joint Fit-up:** | ☐ Yes | ☐ No | ☑ N/A |
| **Approved Drawings:** | ☐ Yes | ☐ No | ☑ N/A | **Approved WPS:** | ☐ Yes | ☐ No | ☑ N/A |
| | | | | **Delayed / Cancelled:** | ☐ Yes | ☑ No | ☐ N/A |

**Bridge No:** 34-0006
**Component:** OBG Trial Assembly

**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) Trial Assembly Areas

Segment 6BW to 6CW (U-Ribs to U-Ribs)

This Quality Assurance (QA) Inspector witnessed final tension verification for the bolts installed at U-Ribs to U-Ribs between Panel Point (PP) 43 and PP 44 for Segment 6BW to 6CW. Tension verification on random basis performed at all the U-Ribs to U-Ribs including the Reinforcing Splice Plate installed area at 1st, 2nd, 6th, 28th, 29th, 30th, 31st, 32nd, 33rd, 34th, 35th, 36th, 37th and 38th and found the tension to be in general compliance. Inspection was performed against the Notification No. 00311 Dated March 28, 2010.

Bolt sizes used were M22 x 65 RC Set# DHGM220035 and final torque required was 433 N-m,

Bolt sizes used were M22 x 80 RC Set# DHGM220029 and final torque required was 447 N-m and

Bolt sizes used were M22 x 85 RC Set# DHGM220096 and final torque required was 583 N-m.

Manual Torque wrench was been used with Sr. No. XQ2-675.

Note: U-Ribs numbering reference taken from Cross Beam as 1st U-Rib and Counter Weight Side as 39th U-Rib.

Segment 6AW (Corner Assembly Vertical Stiffener Road Barrier)

This Quality Assurance (QA) Inspector witnessed final tension verification for Bolts Installed at Vertical Assembly Vertical Stiffener Corner Assembly for Road Barrier between Panel Point (PP) 39 and PP 40 for Segment 6AW Cross Beam side. Inspected 10% on a random basis and found the Rotation of Nut to be in general compliance. Inspection was performed against the Notification No. 00311 Dated March 28, 2010.

Bolt sizes used were M24 x 140 RC Set# DHGM240026 and final torque required was 520 N-m

Bolt sizes used were M24 x 150 RC Set# DHGM240060 and final torque required was 563 N-m and

Bolt sizes used were M24 x 160 RC Set# DHGM240074 and final torque required was 443 N-m

Manual Torque wrench was been used with Sr. No. XQ2-654.

Segment 6BW (Corner Assembly Vertical Stiffener Road Barrier)

This Quality Assurance (QA) Inspector witnessed final tension verification for Bolts Installed at Vertical Assembly Vertical Stiffener Corner Assembly for Road Barrier between Panel Point (PP) 41, PP 42 and PP 43 for Segment 6BW Cross Beam side. Inspected 10% on a random basis and found the Rotation of Nut to be in general compliance. Inspection was performed against the Notification No. 00311 Dated March 28, 2010.

Bolt sizes used were M24 x 140 RC Set# DHGM240026 and final torque required was 520 N-m

Bolt sizes used were M24 x 150 RC Set# DHGM240060 and final torque required was 563 N-m and

Bolt sizes used were M24 x 160 RC Set# DHGM240074 and final torque required was 443 N-m

Manual Torque wrench was been used with Sr. No. XQ2-654.

Segment 6CW (Corner Assembly Vertical Stiffener Road Barrier)

This Quality Assurance (QA) Inspector witnessed final tension verification for Bolts Installed at Vertical Assembly Vertical Stiffener Corner Assembly for Road Barrier between Panel Point (PP) 44 and PP 45 for Segment 6CW Cross Beam side. Inspected 10% on a random basis and found the Rotation of Nut to be in general compliance. Inspection was performed against the Notification No. 00311 Dated March 28, 2010.

Bolt sizes used were M24 x 140 RC Set# DHGM240026 and final torque required was 520 N-m

Bolt sizes used were M24 x 150 RC Set# DHGM240060 and final torque required was 563 N-m and

Bolt sizes used were M24 x 160 RC Set# DHGM240074 and final torque required was 443 N-m

Manual Torque wrench was been used with Sr. No. XQ2-654.

Cross Beam (CB5) (Catwalk Handrail)

This Quality Assurance (QA) Inspector witnessed final tension verification for Bolts connecting Catwalk Handrail to Fiber Plastic Gratings between Panel Point (PP) 32 and PP 33 for CB5. Inspected bolts tightness by 12 inch spanner on random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00312 Dated March 28, 2010.

Bolt sizes used were M16 x 95 RC Set# DHGM160017.

Cross Beam (CB6) (Catwalk Handrail)

This Quality Assurance (QA) Inspector witnessed final tension verification for Bolts connecting Catwalk Handrail to Fiber Plastic Gratings between Panel Point (PP) 38 and PP 39 for CB6. Inspected bolts tightness by 12 inch spanner on random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00312 Dated March 28, 2010.

Bolt sizes used were M16 x 95 RC Set# DHGM160017.

Segment 6AW (FL3 Height Diaphragm to Side Panel)

This Quality Assurance (QA) Inspector witnessed final tension verification for Bolts Installed at FL3 Height Diaphragm between Panel Point (PP) 38, PP 39 and PP 40 for Segment 6AW. Inspected 10% on a random basis and found the Rotation of Nut to be in general compliance. Inspection was performed against the Notification No. 00311 Dated March 28, 2010.

Bolt sizes used were M24 x 65 RC Set# DHGM240009 and final torque required was 567 N-m.

Manual Torque wrench was been used with Sr. No. XQ2-654.

Segment 6CE (FL3 Height Diaphragm to Side Panel)

This Quality Assurance (QA) Inspector witnessed final tension verification for Bolts Installed at FL3 Height Diaphragm between Panel Point (PP) 44, PP 45 and PP 46 for Segment 6CE. Inspected 10% on a random basis and found the Rotation of Nut to be in general compliance. Inspection was performed against the Notification No. 00311 Dated March 28, 2010.

Bolt sizes used were M24 x 65 RC Set# DHGM240009 and final torque required was 567 N-m.

Manual Torque wrench was been used with Sr. No. XQ2-654.

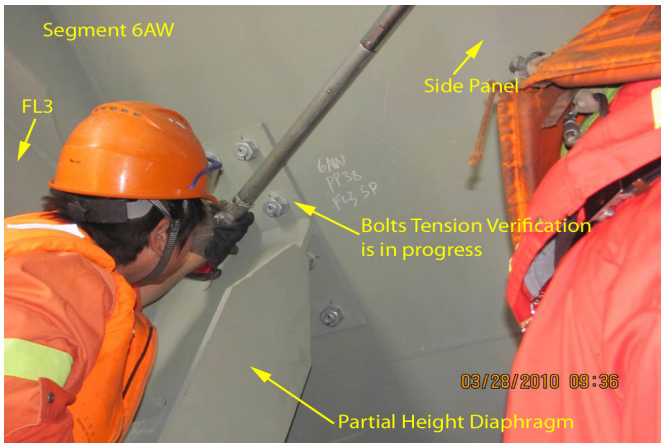
Segment 5BW (FL3 Height Diaphragm to Side Panel)

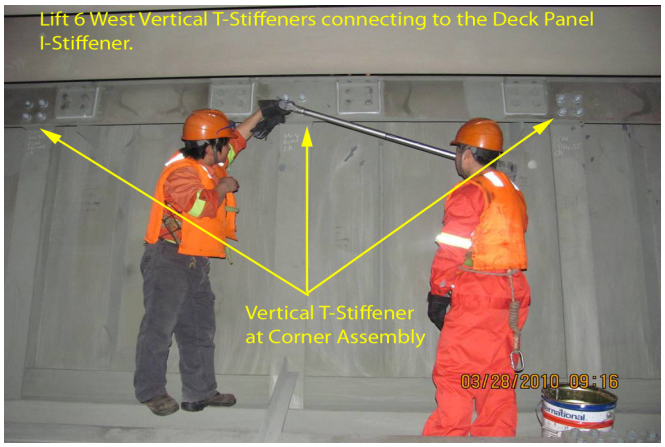
This Quality Assurance (QA) Inspector witnessed final tension verification for Bolts Installed at FL3 Height Diaphragm between Panel Point (PP) 32, PP 33 and PP 34 for Segment 5BW. Inspected 10% on a random basis and found the Rotation of Nut to be in general compliance. Inspection was performed against the Notification No. 00311 Dated March 28, 2010.

Bolt sizes used were M24 x 65 RC Set# DHGM240009 and final torque required was 567 N-m.

Manual Torque wrench was been used with Sr. No. XQ2-654.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.






**Summary of Conversations:**

No relevant conversations.

**Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric T Sang 1500-0042-2372, who represents the Office of Structural Materials for your project.

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| **Inspected By:** | Math,Manjunath | Quality Assurance Inspector |
| **Reviewed By:** | Miller,Mark | QA Reviewer |